IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 3-10 have been amended and claims 11-52 have been added as follows:

Listing of Claims:

Claim 1 (original): A refraction measuring instrument comprising:

measuring means that has a light source for emitting a measurement light beam to an eye to be examined and performs objective measurement on refraction of the eye to be examined based on reflection light of the measurement light beam emitted from the light source, which is reflected on the eye to be examined; and

an optical system for simultaneously guiding the measurement light beam emitted from the light source and visible light incident thereon from an outside to the eye to be examined,

wherein the measuring means measures the refraction of the eye to be examined while a subject is visually recognizing the outside through the visible light based on the reflection light of the measurement light beam which is guided to the eye to be examined through the optical system and reflected on the eye to be examined.

Claim 2 (original): The refraction measuring instrument according to Claim 1 wherein the optical system comprises combining means for combining an optical axis of the measurement light beam with an optical axis of the visible light.

Claim 3 (currently amended): The refraction measuring instrument according to Claim 2 ~~wherein the combining means comprises:~~

~~a free-form-surface prism having a surface for combining the optical axis of the measurement light beam with the optical axis of the visible light by reflection of the measurement light beam and transmission of the visible light; and~~

~~a deviation angle correcting prism for correcting a deviation angle of the visible light passing through the free-form-surface prism~~ further comprising:

eye movement measuring means for measuring eye movement of the eye to be examined;

driving means for driving the measuring means; and

control means for controlling the driving means to cause the measuring means to follow the eye to be examined based on a result of the eye movement measured by the eye movement measuring means.

Claim 4 (currently amended): The refraction measuring instrument according to Claim 3 ~~further comprising a wearing section for enabling the measuring means and the optical system to be worn on a head of the subject~~ wherein the eye movement measuring means comprises:

an irradiation light source for irradiating the eye to be examined with light;

detecting means for detecting an amount of light reflected from a predetermined region close to a limbus of the eye to be examined; and

calculating means for calculating a direction and/or a displacement of the eye movement of the eye to be examined based on the amount of light detected by the detecting means, and

the control means controls the driving means based on a result calculated by the calculating means.

Claim 5 (currently amended): The refraction measuring instrument according to ~~any one of Claims 1 to 4~~ Claim 4 wherein the ~~measuring means further comprises separating means for separating an optical axis of the measurement light beam from the light source from an optical axis of the reflection light of the measurement light beam which is reflected on the eye to be examined~~ calculating means calculated a convergent angle of the eye to be examined based on the amount of light detected by the detecting means.

Claim 6 (currently amended): [[The]] A refraction measuring instrument ~~according to any one of Claims 1 to 5 wherein the measuring means comprises:~~

~~mark projecting means for projecting the measurement light beam from the light source as a mark of a predetermined pattern to the eye to be examined;~~

~~imaging means for imaging the mark projected as the predetermined pattern by the mark projecting means; and~~

~~calculating means for calculating the refraction of the eye to be examined based on a shape of the mark imaged by the imaging means~~ comprising a pair of right and left instruments, each of which is the refraction measuring instrument according to Claim 5 to measure refraction of each of right and left eyes of the subject.

Claim 7 (currently amended): The refraction measuring instrument according to ~~any one of Claims 1 to 6~~ Claim 2 ~~further comprising:~~

~~eye movement measuring means for measuring eye movement of the eye to be examined;~~

~~driving means for driving the measuring means; and~~

~~control means for controlling the driving means to cause the measuring means to follow the eye to be examined based on a result of the eye movement measured by the eye movement measuring means~~ wherein the measuring means comprises:

mark projecting means for projecting the measurement light beam from the light source as a mark of a predetermined pattern to the eye to be examined;

imaging means for imaging the mark projected as the predetermined pattern by the mark projecting means; and

calculating means for calculating the refraction of the eye to be examined based on a shape of the mark imaged by the imaging means.

Claim 8 (currently amended): The refraction measuring instrument according to Claim 7 ~~wherein the eye movement measuring means comprises:~~

~~an irradiation light source for irradiating the eye to be examined with light;~~

~~detecting means for detecting an amount of light reflected from a predetermined region close to a limbus of the eye to be examined; and~~

~~calculating means for calculating a direction and/or a displacement of the eye movement of the eye to be examined based on the amount of light detected by the detecting means; and~~

~~the control means controls the driving means based on a result calculated by the calculating means~~ further comprising:

eye movement measuring means for measuring eye movement of the eye to be examined;

driving means for driving the measuring means; and

control means for controlling the driving means to cause the measuring means to follow the eye to be examined based on a result of the eye movement measured by the eye movement measuring means.

Claim 9 (currently amended): The refraction measuring instrument according to Claim 8 wherein the ~~calculating means calculates a convergent angle of the eye to be examined based on the amount of light detected by the detecting means~~ eye movement measuring means comprises:

an irradiation light source for irradiating the eye to be examined with light;

detecting means for detecting an amount of light reflected from a predetermined region close to a limbus of the eye to be examined; and

calculating means for calculating a direction and/or a displacement of the eye movement of the eye to be examined based on the amount of light detected by the detecting means, and

the control means controls the driving means based on a result calculated by the calculating means.

Claim 10 (currently amended): [[A]] The refraction measuring instrument ~~comprising a pair of right and left instruments, each of which is the refraction measuring instrument according to any~~

~~one of Claims 1 to 9 to measure refraction of each of right and left eyes of the subject~~ according to Claim 9 wherein the calculating means calculates a convergent angle of the eye to be examined based on the amount of light detected by the detecting means.

Claim 11 (new): A refraction measuring instrument comprising a pair of right and left instruments, each of which is the refraction measuring instrument according to Claim 10 to measure refraction of each of right and left eyes of the subject.

Claim 12 (new): The refraction measuring instrument according to Claim 2 wherein the measuring means further comprises separating means for separating an optical axis of the measurement light beam from the light source from an optical axis of the reflection light of the measurement light beam which is reflected on the eye to be examined.

Claim 13 (new): The refraction measuring instrument according to Claim 12 further comprising:

eye movement measuring means for measuring eye movement of the eye to be examined;

driving means for driving the measuring means; and

control means for controlling the driving means to cause the measuring means to follow the eye to be examined based on a result of the eye movement measured by the eye movement measuring means.

Claim 14 (new): The refraction measuring instrument according to Claim 13 wherein the eye movement measuring means comprises:

an irradiation light source for irradiating the eye to be examined with light;

detecting means for detecting an amount of light reflected from a predetermined region close to a limbus of the eye to be examined; and

calculating means for calculating a direction and/or a displacement of the eye movement of the eye to be examined based on the amount of light detected by the detecting means, and

the control means controls the driving means based on a result calculated by the calculating means.

Claim 15 (new): The refraction measuring instrument according to Claim 14 wherein the calculating means calculates a convergent angle of the eye to be examined based on the amount of light detected by the detecting means.

Claim 16 (new): A refraction measuring instrument comprising a pair of right and left instruments, each of which is the refraction measuring instrument according to Claim 15 to measure refraction of each of right and left eyes of the subject.

Claim 17 (new): The refraction measuring instrument according to Claim 12 wherein the measuring means comprises:

mark projecting means for projecting the measurement light beam from the light source as a mark of a predetermined pattern to the eye to be examined;

imaging means for imaging the mark projected as the predetermined pattern by the mark projecting means; and

calculating means for calculating the refraction of the eye to be examined based on a shape of the mark imaged by the imaging means.

Claim 18 (new): The refraction measuring instrument according to Claim 17 further comprising:

eye movement measuring means for measuring eye movement of the eye to be examined;

driving means for driving the measuring means; and

control means for controlling the driving means to cause the measuring means to follow the eye to be examined based on a result of the eye movement measured by the eye movement measuring means.

Claim 19 (new): The refraction measuring instrument according to Claim 18 wherein the eye movement measuring means comprises:

an irradiation light source for irradiating the eye to be examined with light;

detecting means for detecting an amount of light reflected from a predetermined region close to a limbus of the eye to be examined; and

calculating means for calculating a direction and/or a displacement of the eye movement of

the eye to be examined based on the amount of light detected by the detecting means, and

the control means controls the driving means based on a result calculated by the calculating means.

Claim 20 (new): The refraction measuring instrument according to Claim 19 wherein the calculating means calculates a convergent angle of the eye to be examined based on the amount of light detected by the detecting means.

Claim 21 (new): A refraction measuring instrument comprising a pair of right and left instruments, each of which is the refraction measuring instrument according to Claim 20 to measure refraction of each of right and left eyes of the subject.

Claim 22 (new): The refraction measuring instrument according to Claim 2 wherein the combining means comprises:

a free-form-surface prism having a surface for combining the optical axis of the measurement light beam with the optical axis of the visible light by reflection of the measurement light beam and transmission of the visible light; and

a deviation angle correcting prism for correcting a deviation angle of the visible light passing through the free-form-surface prism.

Claim 23 (new): The refraction measuring instrument according to Claim 22 further comprising:

eye movement measuring means for measuring eye movement of the eye to be examined;

driving means for driving the measuring means; and

control means for controlling the driving means to cause the measuring means to follow the eye to be examined based on a result of the eye movement measured by the eye movement measuring means.

Claim 24 (new): The refraction measuring instrument according to Claim 23 wherein the eye movement measuring means comprises:

an irradiation light source for irradiating the eye to be examined with light;

detecting means for detecting an amount of light reflected from a predetermined region close to a limbus of the eye to be examined; and

calculating means for calculating a direction and/or a displacement of the eye movement of the eye to be examined based on the amount of light detected by the detecting means, and

the control means controls the driving means based on a result calculated by the calculating means.

Claim 25 (new): The refraction measuring instrument according to Claim 24 wherein the calculating means calculates a convergent angle of the eye to be examined based on the amount of light detected by the detecting means.

Claim 26 (new): A refraction measuring instrument comprising a pair of right and left instruments, each of which is the refraction measuring instrument according to Claim 25 to measure refraction of each of right and left eyes of the subject.

Claim 27 (new): The refraction measuring instrument according to Claim 22 wherein the measuring means comprises:

mark projecting means for projecting the measurement light beam from the light source as a mark of a predetermined pattern to the eye to be examined;

imaging means for imaging the mark projected as the predetermined pattern by the mark projecting means; and

calculating means for calculating the refraction of the eye to be examined based on a shape of the mark imaged by the imaging means.

Claim 28 (new): The refraction measuring instrument according to Claim 27 further comprising:

eye movement measuring means for measuring eye movement of the eye to be examined;

driving means for driving the measuring means; and

control means for controlling the driving means to cause the measuring means to follow the eye to be examined based on a result of the eye movement measured by the eye movement measuring means.

Claim 29 (new): The refraction measuring instrument according to Claim 28 wherein the eye movement measuring means comprises:

an irradiation light source for irradiating the eye to be examined with light;

detecting means for detecting an amount of light reflected from a predetermined region close to a limbus of the eye to be examined; and

calculating means for calculating a direction and/or a displacement of the eye movement of the eye to be examined based on the amount of light detected by the detecting means, and

the control means controls the driving means based on a result calculated by the calculating means.

Claim 30 (new): The refraction measuring instrument according to Claim 29 wherein the calculating means calculates a convergent angle of the eye to be examined based on the amount of light detected by the detecting means.

Claim 31 (new): A refraction measuring instrument comprising a pair of right and left instruments, each of which is the refraction measuring instrument according to Claim 30 to measure refraction of each of right and left eyes of the subject.

Claim 32 (new): The refraction measuring instrument according to Claim 22 wherein the measuring means further comprises separating means for separating an optical axis of the

measurement light beam from the light source from an optical axis of the reflection light of the measurement light beam which is reflected on the eye to be examined.

Claim 33 (new): The refraction measuring instrument according to Claim 32 further comprising:

eye movement measuring means for measuring eye movement of the eye to be examined;

driving means for driving the measuring means; and

control means for controlling the driving means to cause the measuring means to follow the eye to be examined based on a result of the eye movement measured by the eye movement measuring means.

Claim 34 (new): The refraction measuring instrument according to Claim 33 wherein the eye movement measuring means comprises:

an irradiation light source for irradiating the eye to be examined with light;

detecting means for detecting an amount of light reflected from a predetermined region close to a limbus of the eye to be examined; and

calculating means for calculating a direction and/or a displacement of the eye movement of the eye to be examined based on the amount of light detected by the detecting means, and

the control means controls the driving means based on a result calculated by the calculating means.

Claim 35 (new): The refraction measuring instrument according to Claim 34 wherein the calculating means calculates a convergent angle of the eye to be examined based on the amount of light detected by the detecting means.

Claim 36 (new): A refraction measuring instrument comprising a pair of right and left instruments, each of which is the refraction measuring instrument according to Claim 35 to measure refraction of each of right and left eyes of the subject.

Claim 37 (new): The refraction measuring instrument according to Claim 32 wherein the measuring means comprises:

mark projecting means for projecting the measurement light beam from the light source as a mark of a predetermined pattern to the eye to be examined;

imaging means for imaging the mark projected as the predetermined pattern by the mark projecting means; and

calculating means for calculating the refraction of the eye to be examined based on a shape of the mark imaged by the imaging means.

Claim 38 (new): The refraction measuring instrument according to Claim 37 further comprising:

eye movement measuring means for measuring eye movement of the eye to be examined;

driving means for driving the measuring means; and

control means for controlling the driving means to cause the measuring means to follow the eye to be examined based on a result of the eye movement measured by the eye movement measuring means.

Claim 39 (new): The refraction measuring instrument according to Claim 38 wherein the eye movement measuring means comprises:

an irradiation light source for irradiating the eye to be examined with light;

detecting means for detecting an amount of light reflected from a predetermined region close to a limbus of the eye to be examined; and

calculating means for calculating a direction and/or a displacement of the eye movement of the eye to be examined based on the amount of light detected by the detecting means, and

the control means controls the driving means based on a result calculated by the calculating means.

Claim 40 (new): The refraction measuring instrument according to Claim 39 wherein the calculating means calculates a convergent angle of the eye to be examined based on the amount of light detected by the detecting means.

Claim 41 (new): A refraction measuring instrument comprising a pair of right and left instruments, each of which is the refraction measuring instrument according to Claim 40 to measure refraction of each of right and left eyes of the subject.

Claim 42 (new): The refraction measuring instrument according to Claim 22 further comprising a wearing section for enabling the measuring means and the optical system to be worn on a head of the subject.

Claim 43 (new): The refraction measuring instrument according to Claim 42 wherein the measuring means further comprises separating means for separating an optical axis of the measurement light beam from the light source from an optical axis of the reflection light of the measurement light beam which is reflected on the eye to be examined.

Claim 44 (new): The refraction measuring instrument according to Claim 43 further comprising:

eye movement measuring means for measuring eye movement of the eye to be examined;

driving means for driving the measuring means; and

control means for controlling the driving means to cause the measuring means to follow the eye to be examined based on a result of the eye movement measured by the eye movement measuring means.

Claim 45 (new): The refraction measuring instrument according to Claim 44 wherein the eye movement measuring means comprises:

an irradiation light source for irradiating the eye to be examined with light;

detecting means for detecting an amount of light reflected from a predetermined region close to a limbus of the eye to be examined; and

calculating means for calculating a direction and/or a displacement of the eye movement of the eye to be examined based on the amount of light detected by the detecting means, and

the control means controls the driving means based on a result calculated by the calculating means.

Claim 46 (new): The refraction measuring instrument according to Claim 45 wherein the calculating means calculates a convergent angle of the eye to be examined based on the amount of light detected by the detecting means.

Claim 47 (new): A refraction measuring instrument comprising a pair of right and left instruments, each of which is the refraction measuring instrument according to Claim 46 to measure refraction of each of right and left eyes of the subject.

Claim 48 (new): The refraction measuring instrument according to Claim 43 wherein the measuring means comprises:

mark projecting means for projecting the measurement light beam from the light source as a mark of a predetermined pattern to the eye to be examined;

imaging means for imaging the mark projected as the predetermined pattern by the mark projecting means; and

calculating means for calculating the refraction of the eye to be examined based on a shape of the mark imaged by the imaging means.

Claim 49 (new): The refraction measuring instrument according to Claim 48 further comprising:

eye movement measuring means for measuring eye movement of the eye to be examined;

driving means for driving the measuring means; and

control means for controlling the driving means to cause the measuring means to follow the eye to be examined based on a result of the eye movement measured by the eye movement measuring means.

Claim 50 (new): The refraction measuring instrument according to Claim 49 wherein the eye movement measuring means comprises:

an irradiation light source for irradiating the eye to be examined with light;

detecting means for detecting an amount of light reflected from a predetermined region close to a limbus of the eye to be examined; and

calculating means for calculating a direction and/or a displacement of the eye movement of the eye to be examined based on the amount of light detected by the detecting means, and

the control means controls the driving means based on a result calculated by the calculating means.

Claim 51 (new): The refraction measuring instrument according to Claim 50 wherein the calculating means calculates a convergent angle of the eye to be examined based on the amount of light detected by the detecting means.

Claim 52 (new): A refraction measuring instrument comprising a pair of right and left instruments, each of which is the refraction measuring instrument according to Claim 51 to measure refraction of each of right and left eyes of the subject.